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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/914,181

12/07/2001

Robert Andre

AT-19.PCT/US

9542

466

7590

01/27/2004

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EXAMINER

AFTERGUT, JEFF H

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,181

Applicant(s)

ANDRE ET AL.

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 2, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over E.P. 897,174 (newly cited) in view of E.P. 911,803 (newly cited) and optionally further taken with any one of Hom (newly cited), Whitmore et al (newly cited) or Beggs et al (newly cited).

E.P. '174 taught a process for forming an acoustical panel which included the steps of providing a mold 18, applying a mesh layer of acoustical fabric material to the mold 12, applying reinforcing filamentary material via a winding operation onto the layer of acoustical material (see Figures 6B and 7B and note layers 14, 114, 214, and 314), applying a layer of honeycomb material 22 over the strengthening layer of fibers 14, 114, 214, and 314, and applying a reflector layer upon the honeycomb layer (see layer 24, Figure 7D, 7E). Applicant is additionally referred to Figures 8A-8E for a description of the overall operation for application of the various layers to the mold in the manufacture of the acoustical panel. The reference failed to teach that one skilled in the art would have applied the reinforcement (strengthening) layer of fibers upon the mold prior to the application of the acoustical cloth onto the same in the manufacture of the acoustical panel.

E.P. '803 taught that it was known to incorporate the strengthening layer of reinforcement either under the acoustical fabric material or over the fabric material (such that the acoustical fabric material was not left exposed in the finished panel assembly), see column 1, lines 32-40, column 2, lines 36-43, column 1, lines 50-53, for example. It should be noted that the entire assembly was assembled together with adhesive and then the entire assembly was

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cured with the application of heat and pressure in an oven/vacuum bag. In order to provide better protection for the acoustic fabric, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dispose the reinforcement and strengthening materials against the mold initially followed by application of the acoustical mesh material in E.P. 897,174 as such would have afforded one the benefits of increased service life for the acoustical panel as suggested by E.P. 911,803. It should be noted that the heat and pressure applied by E.P. '803 would have been understood to have been performed in an autoclave as such was conventionally employed in the manufacture of fiber reinforced composite attenuation panels and was the commonplace manner in which one applied heat and pressure to assemble the layers together.

With respect to claim 2, note that the winding operation in E.P. '174 was performed to define a particular porosity for the finished panel assembly. With respect to claim 5, note that the reference to E.P. '174 clearly suggested that those skilled in the art at the time the invention was made would have incorporated several layers of crossing filaments for the structural layer. Regarding claim 7, note that the references suggested the specified panel configuration as claimed. Regarding claim 8, note that the reference to E.P. '803 suggested that those skilled in the art would have incorporated an adhesive between the various layers in the manufacture of the composite panel.

While it is believed that one skilled in the art would have readily discerned that the assembly would have been disposed in an autoclave to apply the appropriate pressure to the assembly during curing of the panel assembly as such was commonplace in the art (and it is taken as conventional in the art of bonding a panel assembly to utilize the same), the reference to any one of Horn, Whitmore et al, or Beggs et al suggested that those skilled in the art at the time

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the invention was made would have incorporated an autoclave to secure the various layers together. Applicant is more specifically referred to Hom at column 4, lines 28-44 and column 3, lines 45-51, Whitmore et al at column 3, lines 16-31, or Beggs et al at column 4, lines 10-34 all suggested that in the formation of an acoustical panel one skilled in the art would have incorporated an autoclave to apply the pressure and heated during the same in order to cure the resin in the assembly to make the finished panel. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the techniques of any one of Hom, Whitmore et al, or Beggs et al to provide for the heat and pressure necessary to cure the resin layers in the formation of an acoustical panel wherein the reinforcing material was provided on the exterior of the panel as suggested by E.P. 911,803 in the process of making an acoustical noise attenuation panel as taught by E.P. 897,174.

3. Claims 3, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 2 further taken with Japanese Patent 10-128778.

While the references as set forth above in paragraph 2 suggested the overall operation, the references applied failed to suggest that one skilled in the art would have baked (disposed the structural reinforcing layer in an autoclave) prior to piercing to form (or reform) holes in the assembly. It should be noted that claim 3 does not require that the structural layer be disposed upon the mold during the heating in the autoclave as well as during hole formation. The reference to Japanese Patent '778 suggested that those skilled in the art at the time the invention was made would have incorporated a reinforcing layer with opening therein in the formation of an acoustical panel. The reference suggested that prior to perforating of the fiber reinforced plies, one skilled in the art would have disposed the assembly in a vacuum bag and subjected the same

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to heat and pressure in order to increase the viscosity of the resin such that subsequent processing would not result in closing of the openings formed in perforating the assembly (in other words enough heat and pressure were applied to stiffen the assembly of resin impregnated fibers in order to prevent their movement subsequent to hole formation by piercing). After application of heat and pressure, the structure material was disposed on a mold and pieced in order to form openings therein. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Japanese Patent 10-128778 in the process of making the panels as set forth above in paragraph 2 as the use of preheating the structural material prior to piercing the same to form the structural materials would have prevented the resin in the structural materials from filling the openings formed in the assembly.

With regard to claim 4, note that the references to any one of Hom, Whitmore et al, or Beggs et al suggested that it was known per se to secure the acoustic woven material to the structural materials first flowed by assembly of the preformed facing materials to the honeycomb core and the backing with an adhesive. Regarding claim 6, the openings provided by Japanese Patent '778 appear to meet the requirements of the claim as depicted in Figure 2(b).

Response to Arguments

4. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that: (1) the reference to Newsam failed to teach that those skilled in the art would have assembled all of the layers on a mold and cured the resin therein in an autoclave, and; (2) the reference to Ohliger et al failed to teach perforation of the structural

material while the same was on the mold and cured prior to the perforating operation. These arguments are not persuasive for the following reasons.

Regarding the first argument, the applicant is advised that the reference to E.P. '714 taught the specified required assembly of the layers in the mold. While the reference did not suggest that the reinforcing structural materials would have been disposed on the exterior of the assembly, the reference to E.P. '803 suggested that those skilled in the art would have incorporated the reinforcing material over the acoustic woven fabric materials in order to limit the exposure of the acoustical fabrics to the exterior environments.

Regarding the applicant's second argument regarding the reference to Ohliger et al, the applicant is advised that claim 3 does not require that the reinforcing layers be cured prior to the perforation of the same. Additionally, there is no requirement that the reinforcing layers be disposed upon the mold when the perforating operation takes place. The claim as presented requires that the material be heated in an autoclave prior to perforating. The reference to Japanese Patent 10-128778 suggested this processing.

Conclusion

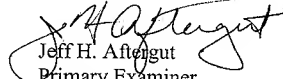
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Jeff H. Aftengut
Primary Examiner
Art Unit 1733

JHA

January 15, 2004